

Appln. No.: 10/675,362
Reply to Office Action dated 7/14/2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claims 1, 7, 9, 11, 17, and 19 have been amended as follows. Claims 2-6, 8, 12-16, and 18 have been cancelled.

Listing of Claims:

1. (Currently Amended) A postage meter printing apparatus for use in a continuous high velocity document-mail piece processing system, the printing apparatus comprising:

a transport path conveying a series of documents-mail pieces at a print velocity;

an upstream ink jet print head fixedly positioned contiguous with the transport to print postage indicia on documents-mail pieces transported thereon;

a downstream ink jet print head, fixedly positioned downstream of the upstream print head, and contiguous with the transport to print postage indicia on documents-mail pieces transported thereon;

a controller controlling a first one of the upstream or downstream print heads to print postage indicia on transported documents-mail pieces traveling at a print velocity, the controller further switching to a second of the upstream or downstream print heads when the first one is out of service undergoes an ink jet maintenance operation; wherein the controller periodically takes the print head that is in use out of service to perform maintenance operations; whereby the maintenance operations are a print head wipe or a print head purge and whereby subsequent to a maintenance operation the first print head is in a condition to return to service.

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2-6. (Cancelled)

7. (Currently Amended) The printing apparatus of claim 4-1 wherein the upstream and downstream print heads are comprised of drop-on-demand print heads.

8. (Cancelled)

9. (Currently Amended) The printing apparatus of claim 1 further comprising at least one sensor upstream of the first or second print head detecting a ~~document~~mail piece approaching the upstream or downstream print head, the controller triggering the upstream or downstream print head based on a predetermined interval subsequent to detecting the ~~document~~mail piece, the controller adjusting the predetermined interval depending on which of the upstream or downstream print head is in use to account for the different locations of the upstream and downstream print heads.

10. (Previously presented) The printing system of claim 1 wherein the print heads are electronically geared to the transport so that variations in print velocity during a printing operation will not affect an image being printed.

11. (Currently amended) A printing method for continuous high velocity ~~document~~mail piece processing, the printing method comprising:

transporting a series of ~~documents~~mail pieces at a print velocity;

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fixedly positioning an upstream ink jet print head contiguous with a transport to print on documents-mail pieces transported thereon at the print velocity;

fixedly positioning a downstream ink jet print head, downstream of the upstream print head, and contiguous with the transport to print on documents-mail pieces transported thereon at the print velocity;

controlling a first one of the upstream or downstream print heads to print postage indicia on transported documentsmail pieces traveling at the print velocity;

periodically removing the print head that is in use out of service and performing maintenance operations on the print head, the maintenance operations comprising a print head wipe or a print head purge;and

switching to a second of the upstream or downstream print heads for printing when the first one is out-of-service;removed for maintenance operations; and

returning the print head removed from service back into service after performing the maintenance operations.

12-16. (Cancelled)

17. (Currently Amended) The printing method of claim 44-11 further comprising using drop-on-demand ink jet printing for the upstream and downstream print heads.

18. (Cancelled)

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19. (Currently Amended) The printing method of claim 11 further comprising detecting a document-mail piece approaching the upstream or downstream print head, triggering the upstream or downstream print head based on a predetermined interval subsequent to detecting the document-mail piece, and adjusting the predetermined interval depending on which of the upstream or downstream print head is in use to account for the different locations of the upstream and downstream print heads.

20. (Previously presented) The printing method of claim 11 further including electronically gearing the print heads to the transport so that variations in print velocity during printing will not affect an image being printed.